ABSTRACT

The present invention aims to improve cycling characteristics with maintaining high capacity, which is a feature of lithium-nickel composite oxide, and provides a non-aqueous electrolyte secondary battery comprising a positive electrode which is configured by applying on a current collector a mixture which comprises: a lithium-containing composite oxide having a hexagonal system structure, wherein Co is substituted for part of nickel in a lithium-nickel composite oxide (the substitution percentage ranges from 5 to 30 %) and, in addition, at least one kind of such elements as Al, Mn, Ti, and Mg is substituted (the substitution percentage is less than 20 %); a binder; and a conductive material; and said lithium-containing composite oxide is characterized in that a half width of the (110)-plane-based diffraction peak obtained from powder X-ray diffraction method, in which CuKα line is used as characteristic X-ray, is larger than 0.13° and smaller than 0.20°, and that the ratio of the (003)-plane-based diffraction peak intensity to the (104)-plane-based diffraction peak intensity is larger than 1.2 and smaller than 1.8.